EDNET Network Certification Process

Executive Summary

The application network certification process is a prerequisite for adding new applications to the Department of Education's computer network (the EDNET). The certification of applications is necessary to ensure that an application does not disrupt the network by creating excessive network traffic or other disruptions that have the potential for limiting access to the network by the end user community.

Application sponsors should note that this process is designed to test applications that have already been fully developed by an application vendor. The application vendor will need to provide a licensed copy of all software to be loaded on both the test server(s) and test client workstations. Detailed instructions for the installation of the software will also need to be provided at the time of the test.

There are some unique development efforts that require a portion of the application development to be completed at the Department of Education. In these situations the application developer will be required to provide system administration and data base management support for an application until it is certified and moved into a production environment.

Part I of this document outlines the information that an application sponsor needs to supply at the time that an application is submitted to the IRG Technology Center for Network Certification. The Application for Network Certification is an appendix to this document. The application sponsor should work with the vendor or developer of the application to assemble this information. Applications must be submitted to the attention of Technology Center Manager, FOB10, Room A315. Technology Center staff will respond to the application sponsor within five business days to either request additional information, or to provide a tentative start date for the network certification of the application in question, and address any issues that arise from the review of the application.

Part II of this document outlines the components of the Network Certification process, and the information that will be included in the Network Certification Report, that will be provided to the application sponsor at the conclusion of the network certification process.

Part I. To be completed by the sponsor of the application to be tested.

1.   **Application Description**

Provide a summary of the application to be certified/evaluated. This information will be provided using the attached forms found at the end of this document. This document and the attached forms are available in Microsoft Word version 7.0 format.

- Application Sponsor

- Application name

- Vendor/Developer

2.   **Application Requirements**

Define any requirements the application has regarding network implementation. This will include:

- Protocol(s)

- Security Requirements

- Summary (if applicable)

3. Implementation Requirements

- Deployment - Will the application be deployed Department of Education wide (cross domains) or will it be used by a portion of the Department (by users within a single domain)? What is the planned number of users for this application?

- Requirements for Server (if network based)

- Requirements for Client (PCs)

- Other Resource Requirements

- Summary (if applicable)

Part II. To be completed by the IRG Technology Center

The Network certification process will evaluate applications using the following criteria. This information will be included in the Network Certification report that will be provided to the sponsoring office at the conclusion of the Network Certification test. Information provided in the report by the application sponsor will be verified and any issues will also be incorporated in the Implementation Issues Section of the Certification report.

Network Requirements

Network Traffic

This section documents the network traffic generated by the application. Of particular interest is the amount of traffic generated during:

1. Initial load
2. Retrieving data
3. Saving data
4. Replication of data (if applicable)

Information or summary of the network certification log generated by Performance Monitor will also be included in this portion of the Network Certification Report.

Network Timings

This section will document the time required to load the application in the Technology Center environment. These tests will be performed under low network traffic conditions as well as conditions with heavy network traffic.

The current server platform to be used for these timing tests will be a Proliant 1500 with 1 75 MHz. processor and 48 megabytes of memory. The server will be configured with the standard disk controller(s) and hard drives as the production servers in use within the Department of Education environment, unless the vendor or developer has a specific hardware platform recommendation.

If the vendor submits a recommended server platform then arrangements will be made to acquire a server matching the recommended platform to run the tests.

The clients that will be used will be configured with the Windows for Workgroups 3.11 load, as it has been developed for the Department of Education.

It will include a summary of the findings outlining any concerns or related issues.

The timing tests will be conducted on the following platforms:

Compaq 486/66 w/8 megabytes of memory

1. Low traffic conditions
2. Heavy traffic conditions

Compaq 486/66 w/16 megabytes of memory

1. Low traffic conditions
2. Heavy traffic conditions

Compaq Pentium DeskPro 5/60 with 8 megabytes of memory

1. Low traffic conditions
2. Heavy traffic conditions

The application sponsor will be responsible for providing any additional client hardware platforms proposed for use with the application.

EDNET Network Certification Application

Application Form

Items in this form should be completed by the application sponsor with help from, or by the vendor/developer doing the development work for the application. This form will define the hardware and software recommendations for the system under evaluation. This form is used to determine the impact that the application has on a Department of Education server if it is to be server based, or if it is to utilize a server for the storage of data or processing.

This form is available in Microsoft Word 7.0 format

Application Description

Application Sponsor

1. Name of Principal Office submitting this application: _____

2. Principal Office contact name: _____

3. Contact phone number: _____

Application Name

4. Name of application being developed: _____

5. Version number of application: _____

6. Brief description of application platform (Oracle, client server):

_____
_____
_____

Vendor/Developer

7. Name of Vendor/Developer identified as prime contractor for project: _____

8. Project contact: _____

9. Project contact phone number: _____

10 Name and contact number of any additional companies or individuals involved in the project:

_____   _____

_____   _____

_____   _____

Application Requirements

Protocols

11. List the supported protocol(s):

NetBeui   Yes   No

TCP/IP	Yes	No
XNS	Yes	No
NamedPipes Ver.1	Yes	No
NamedPipes Ver.2	Yes	No
RPC	Yes	No
AppleTalk	Yes	No
_____	Yes	No
_____	Yes	No

Recommended Protocol(s)

12. List the recommended protocol(s) for this application in order of desirability:

_____

_____

_____

_____

Protocol Configuration Requirements

13. List any specific configurations that are required for this protocol

_____

_____

_____

Security Requirements

14. Include any security requirements required for this application or it's related data:

_____

_____

_____

Summary

15. Include any application specific requirements not discussed in this section.

_____

_____

_____

_____

Implementation Requirements

Deployment

16. Will application be used by more than one Principal Office or domain?   Yes   No
 (If you answer no, please skip to question 18)

Target users

17. Please list the principal offices or domains that will use this application (if application is to be Department of Education wide check "Enterprise wide" block):

Enterprise Wide

_____

_____

_____

_____

Total number of users: _____

18. Will the application be used in the Department of Education regional offices: Yes   No

Please answer questions 19 and 20 if the application will only be used by one specific Principal Office or domain

19. What domain will this application be used in: _____

20. Total number of users: _____

Requirements for Server (if network based)

Server Hardware Configuration

21. Does this application require a dedicated server(s) or any hardware modifications to a server?   Yes   No

_____
_____
_____
_____
_____
_____
_____

Please complete the following questions if a specific server hardware configuration is recommended.

22. Recommended Server Platform: _____

23. Number of servers recommended: _____

Memory

24. Total amount of memory to be installed in server: _____

25. Amount of memory to be dedicated to a specific process: _____

If memory is to be dedicated to a specific process(s) please provide an explanation below:

_____
_____
_____
_____

Processor(s)

26. Recommended processor speed: _____

27. Number of recommended processors: _____

Disk Controller(s)

28. Type of disk controller(s) recommended: _____

29. Number or recommended disk controllers: _____

30. Summary: If more than one controller or type of controller is recommended please explain below:

_____
_____
_____
_____

Hard Disk Configuration

Physical Hard disk configuration(s)

31. Number of hard physical drives to be installed in system: _____

32. Number or fault tolerant disk sets to be installed in system: _____

33. Disk sets - If more than one hardware configured RAID disk set is recommended then please complete the chart below.

	Type of Disk Set	Number of Disks in set	Size of drives	Comments
Sample	RAID 5	5	2.1 Gig	4 for RAID set, one hot spare for 6 gig total
Disk Set 1				
Disk Set 2				
Disk Set 3				
Disk Set 4				

Logical disk configuration(s)

34. Number of logical drives (disk partition(s)) recommended: _____

35. Please use the chart below to describe the partition(s) size and function.

	Partition Size	Partition Function
C Partition		
D Partition		
E Partition		
F Partition		

Server(s) Software Configuration

Replication

36. If more than one server is to be used please outline any replication or other procedures employed to update data on the various servers.

_____
_____
_____
_____

Modifications to NT Server's Registry

37. List any changes that must be made manually to the NT Registry

_____

_____

_____

_____

NT System Services that need to be added.

38. List any services that must be added to support the application

Service Name	Startup Manually	Startup Automatically	Comments

Startup Procedures

39. Please list any unique startup procedures required to be performed when the server is restarted, this includes the manual starting of services or processes, or the logging on of special accounts. **For any procedures listed below please submit a separate document outlining any instructions needed to perform these procedures**.

    1. _____
    2. _____
    3. _____

Stop/Shut Down Procedures

40. Please list any unique shut down procedures required to be performed when the server is to be brought down. This includes the manual stopping of services or processes, or the checking of the status of any services or process, or objects. **For any procedures listed below please submit a separate document outlining any instructions needed to perform these procedures**.

    1. _____
    2. _____
    3. _____

Backup Procedures

41. Please list any unique procedures that must be performed prior to or after a backup is to be performed. This includes the manual stopping or starting of services or processes, the checking of the status of any services or process, or objects. **For any procedures listed below please submit a separate document outlining any instructions needed to perform these procedures**.

    1. _____
    2. _____
    3. _____

Server Overhead (Disk Storage)

42. Application Storage requirements: _____

43. Anticipated Data Storage requirements: _____

Additional Components (Oracle, SQL Server, Tape backups, …)

Software

44.   Please list any software components that need to be installed on the server:

_____

_____

_____

Hardware

45.   Please list any hardware components that need to be installed on the server:

_____

_____

_____

Summary of Server Requirements

46.   Please address any issues not covered in the previous sections relating to the server configuration here.

_____

_____

_____

Requirements for Clients (PCs)

This section will discuss any issues related to the configuration of the workstation or client so that it will be able to access the application in question.

Hardware Configuration information

47.   Please complete the following table in order to provide the minimum and recommended client hardware configuration:

Item	Minimum	Recommended	Comments
Processor/speed			
Memory - Total Physical			
Memory - Free Conventional			
Memory - Configured Expanded			
Memory - Configured Extended			
Free disk space			
Video			

Software configuration information

48. Please complete the following table in order to provide the supported client operating systems:

(The Statement of Work should include an implementation plan be provided for each client supported)

1.	DOS 6.X	Yes	No
2.	WINDOWS 3.1	Yes	No
3.	WINDOWS FOR WORKGROUPS 3.11	Yes	No
4.	WINDOWS'95	Yes	No
5.	WINDOWS NT WORKSTATION	Yes	No
6.	System 7.X	Yes	No

CONFIG.SYS

49. List any modifications needed for the CONFIG.SYS file.

_____

_____

_____

50. Attach a printed copy of a configured CONFIG.SYS file.

AUTOEXEC.BAT

51. List any modifications or additions needed for the AUTOEXEC.BAT file.

_____

_____

_____

52. Include a printed copy of a configured AUTOEXEC.BAT file.

SYSTEM.INI

53. List any modifications or additions needed for the SYSTEM.INI file.

_____

_____

_____

54. Include a printed copy of the SYSTEM.INI file.

WIN.INI

55. List any modifications or additions needed for the WIN.INI file.

_____

_____

_____

56. Include a printed copy of a configured WIN.INI file.

Additional .INI files needed for client

57. List any additional .INI files needed for a client configuration.

_____

_____

_____

58. Include a printed copy of the above .INI files.

Registry (Windows'95, Windows NT Workstation)

59. List any modifications or additions needed for the Registry

_____

_____

_____

Software components

60. Include a complete list of all files to be installed on the client or server and their recommended path.

61. Using the table below list of components that constitute a client load:

Item	Location (Client/Server)	Disk space required	Path (G:\apps\appname)

Summary of Client Requirements

_____

_____

_____

_____

Other Resource Requirements

62. List any additional requirements not addressed above needed to implement the application.

_____

_____

_____

Summary

63. Include any implementation issues not discussed in this form.

_____

_____

_____

_____

_____

_____

_____